

## **Attachment 10a. Michigan Results Communications**

### **MICHIGAN DEPARTMENT OF COMMUNITY HEALTH DIVISION OF ENVIRONMENTAL HEALTH**

#### **Biomonitoring of Persistent Toxic Substances in Michigan Urban Fisheaters**

#### **Results Letters**

**Revised June 27, 2012**

State programs will work with their respective ethics sub-committees and ATSDR to improve and revise these letters. ATSDR and the states will take into consideration current guidelines via subject matter experts on the communication of results and potential follow-up with biomonitoring program respondents.

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**Attachment 10a1.**

**Letter 1**

**Full results letter to participants  
whose results do not exceed action levels.**



STATE OF MICHIGAN  
DEPARTMENT OF COMMUNITY HEALTH  
LANSING

RICK SNYDER  
GOVERNOR

OLGA DAZZO  
DIRECTOR

Date

Name

Address

City, State Zip Code

Dear:

Last summer, you agreed to be part of the Michigan Department of Community Health Fish Eaters Study. We tested your blood and urine for chemicals that are often found in fish.

We are pleased to tell you that your test results for cholesterol, mercury, lead, arsenic, and cadmium were normal. And, your other test results are like those of people your age in the United States.

The second and third pages of this letter have your test results. The first row gives the name of each chemical that we looked for in your blood and urine. Your test results are in the second, or blue row, under "Your Test Results".

The orange, or third row, under "Study Results" has the results for the other people from the Detroit and Saginaw areas who were in the study. We gave you these test results so you can compare your results to theirs. The results are given as a range, meaning the lowest to the highest test results for the group are shown in this row.

We also thought you might like to know the test results of people around the country who have been in similar studies. Their blood and urine were also tested for chemicals. Their results are in the purple, or fourth, row under "U.S. Results".

The fourth page has a table labeled "Units". It gives the units of measurement for each chemical. If you take your results to your doctor, he or she will need to know the units for each chemical your blood and urine were tested for.

There is a lot of information in this letter. If you have questions, please feel free call 1-800-648-6942 and ask for Sue Manente.

Thank you very much for being part of this important study, we really appreciate your time and effort.

Sincerely,

Linda Dykema, Manager

## Division of Environmental Health

CAPITOL VIEW BUILDING • 201 TOWNSEND STREET • LANSING, MICHIGAN 48913  
[www.michigan.gov](http://www.michigan.gov) • 517-373-3740

**Test Results** - Tests for the chemicals were done on blood or urine, except for mercury. Some chemicals are easier to find in blood and some are easier to find in urine. Mercury can be found in both blood and urine.

Blood Test Results

Test	Your Test Results	Study Results	U.S. Results
		Range	Range
Chlordane - Oxychlordane			11.4 - 39.2
Chlordane - Heptachlor epoxide			<LOD - 20.6
Chlordane - <i>trans</i> -Nonachlor			17.3 - 74.7
<i>p,p'</i> -Dichlorodiphenyltrichloro-ethane (DDT)			<LOD - 20.7
<i>p,p'</i> -Dichlorodiphenyldichloro-ethene (DDE)			233 - 1,990
<i>o,p'</i> -Dichlorodiphenyltrichloro-ethane (DDT)			<LOD - <LOD
Hexachlorobenzene			15.1 - 29.0
Lead			1.3 - 3.9
Lindane			< 0.002
Manganese			4.7-18.3
Mercury			0.89 - 5.32
Mirex			<LOD - 15.4
PBB-153 (Polybrominated Biphenyl number 153)			Age 18-39 years: 1.6 - 12.2 Age 40 -59 years: 2.9 - 36.9 Age 60 years and older: 3.4 - 52.8
Dioxins			Age 18-39 years: < 18.7 Age 40-59 years: < 32.0 Age 60 years and older: < 63.2
Total PCB (Polychlorinated Biphenyls)			TBD

<b>Test</b>	<b>Your Test Results</b>	<b>U.S. Guidelines</b>
<b>Total Cholesterol</b>		Less than 200 mg/dL is Desirable 200-239 mg/dL is Borderline High 240 mg/dL is High

## **Urine Test Results**

## Units of Measurement

This table gives the “units of measurement” for each of the chemicals. For example, cholesterol is measured in mg/dL (milligrams of cholesterol per deciliter of blood). If you give your results to your doctor, he or she will want to know these units of measure.

<b>Blood Tests</b>	<b>Units of Measurement</b>
Cholesterol	mg/dL
Chlordane	ng/g of lipid
DDT (Dichlorodiphenyltrichloroethane)	ng/g of lipid
Dioxins	pg-TEQ/g of lipid
Hexachlorobenzene	ng/g of lipid
Lead	µg/dL
Lindane	µg/mL
Manganese	ng/mL
Mercury	µg/L
Mirex	ng/g of lipid
PBB (Polybrominated Biphenyls)	ng/g of lipid
PCB (Polychlorinated Biphenyls)	ng/g of lipid
<b>Urine Tests</b>	<b>Units of Measurement</b>
Arsenic	µg/g of creatinine
Cadmium	µg/g of creatinine
Mercury	µg/g of creatinine



**Attachment 10a2.**

**Letter 2**

**Action level exceedences letter  
sent to participants with elevated blood or urine  
results for arsenic, cadmium, lead, or mercury**



STATE OF MICHIGAN  
DEPARTMENT OF COMMUNITY HEALTH  
LANSING

RICK SNYDER  
GOVERNOR

OLGA DAZZO  
DIRECTOR

Date

Name

Address

City, State Zip Code

Dear:

Last summer, you agreed to be part of the Michigan Department of Community Health Fish Eaters Study. We tested your blood and urine for chemicals that are often found in fish.

We found that your (arsenic/cadmium/lead/mercury) in your (blood/urine) level is (.....{ $\mu\text{g}/\text{dl}$ ,  $\mu\text{g}/\text{l}$ }). This means that your (arsenic/cadmium/lead/mercury) level is higher than most people. This does not mean that you are sick or will get sick. But we do strongly recommend that you visit your doctor and take this letter with you.

I have enclosed a fact sheet with more information about (arsenic/cadmium/lead/mercury) and your health.

We will send your other tests as soon as they are available. If you move, please let us know so we can send your results to your new address.

If you have questions, please call 1-800-648-6942 and ask for Sue Manente.

Thank you for being part of this important study. Your time and effort are greatly appreciated.

Sincerely,

Linda Dykema, Manager  
Division of Environmental Health

**Attachment 10a3.**

**Letter 3**

**Action level exceedences letter  
with elevated cholesterol levels**



STATE OF MICHIGAN  
DEPARTMENT OF COMMUNITY HEALTH  
LANSING

RICK SNYDER  
GOVERNOR

OLGA DAZZO  
DIRECTOR

Date

Name

Address

City, State Zip Code

Dear:

Last summer, you agreed to be part of the Michigan Department of Community Health Fish Eaters Study. We tested your blood and urine for chemicals that are often found in fish.

We also tested your total cholesterol on (date) and found that your level is (.....mg/dl). This means your cholesterol level may be (borderline high/high). This was a non-fasting blood test, meaning we did not ask you to stop eating in the 12 hours before the test. Usually you are asked to fast before routine cholesterol tests. Fasting was not necessary for the Fish Eaters Study.

I have included a fact sheet about cholesterol. We recommend that you talk to your doctor to find out if you should have another blood cholesterol test. Your doctor can tell you whether or not your health is at risk from high cholesterol.

We will send your other tests results as soon as they are available. If you move, please let us know so we can send your results to your new address.

If you have questions, please call 1-800-648-6942 and ask for Sue Manente. Thank you for being part of this important study. Your time and effort are greatly appreciated.

Sincerely,

Linda Dykema, Manager  
Division of Environmental Health

**Attachment 10a4.**

**Letter 4**

**Full results letter for participants  
who previously received Letter 2 or 3**



STATE OF MICHIGAN  
DEPARTMENT OF COMMUNITY HEALTH  
LANSING

RICK SNYDER  
GOVERNOR

OLGA DAZZO  
DIRECTOR

Date

Name

Address

City, State Zip Code

Dear:

Last summer, you agreed to be part of the Michigan Department of Community Health Fish Eaters Study. We tested your blood and urine for chemicals that are often found in fish.

Earlier, we sent you a letter because your (arsenic/cadmium/lead/mercury/cholesterol) level was higher than most people. The letter recommended you make an appointment your doctor for medical advice. A copy of that letter is also included. If you have not seen your doctor yet, please make an appointment and take this information with you.

The second and third pages of this letter have all of your test results. The first row gives the name of each chemical that we looked for in your blood and urine. Your test results are in the second, or blue row, under "Your Test Results".

The orange, or third row, under "Study Results" has the results for the other people from the Detroit and Saginaw areas who were in the study. We gave you these test results so you can compare your results to theirs. The results are given as a range, meaning the lowest to the highest test results for the group, are shown in this row.

We also thought you might like to know the test results of people around the country who have been in similar studies. Their blood and urine were also tested for chemicals. Their results are in the purple, or fourth, row under "U.S. Results".

The fourth page has a table called "Units". It gives the units of measurement for each chemical. If you take your results to your doctor, he or she will need to know the units for each chemical your blood and urine were tested for.

If you have questions, please feel free call 1-800-648-6942 and ask for Sue Manente.

Thank you very much for being part of this important study, we really appreciate your time and effort.

Sincerely,

Linda Dykema, Manager

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**Test Results** - Tests for the chemicals were done on blood or urine, except for mercury. Some chemicals are easier to find in blood and some are easier to find in urine. Mercury can be found in both blood and urine.

Blood Test Results

Test	Your Test Results	Study Results	U.S. Results
		Range	Range
Chlordane - Oxychlordane			11.4 - 39.2
Chlordane - Heptachlor epoxide			<LOD - 20.6
Chlordane - trans-Nonachlor			17.3 - 74.7
<i>p,p'</i> -Dichlorodiphenyltrichloro-ethane (DDT)			<LOD - 20.7
<i>p,p'</i> -Dichlorodiphenyldichloro-ethene (DDE)			233 - 1,990
<i>o,p'</i> -Dichlorodiphenyltrichloro-ethane (DDT)			<LOD - <LOD
Hexachlorobenzene			15.1 - 29.0
Lead			1.3 - 3.9
Lindane			< 0.002
Manganese			4.7-18.3
Mercury			0.89 - 5.32
Mirex			<LOD - 15.4
PBB-153 (Polybrominated Biphenyl number 153)			Age 18-39 years: 1.6 - 12.2 Age 40 -59 years: 2.9 - 36.9 Age 60 years and older: 3.4 - 52.8
Dioxins			Age 18-39 years: < 18.7 Age 40-59 years: < 32.0 Age 60 years and older: < 63.2
Total PCB (Polychlorinated Biphenyls)			TBD



<b>Test</b>	<b>Your Test Results</b>	<b>U.S. Guidelines</b>
<b>Total Cholesterol</b>		Less than 200 mg/dL is Desirable 200-239 mg/dL is Borderline High 240 mg/dL is High

## **Urine Test Results**

## Units of Measurement

This table gives the “units of measurement” for each of the chemicals. For example, cholesterol is measured in mg/dL (milligrams of cholesterol per deciliter of blood). If you give your results to your doctor, he or she will want to know these units of measure.

<b>Blood Tests</b>	<b>Units of Measurement</b>
Cholesterol	mg/dL
Chlordane	ng/g of lipid
DDT (Dichlorodiphenyltrichloroethane)	ng/g of lipid
Dioxins	pg-TEQ/g of lipid
Hexachlorobenzene	ng/g of lipid
Lead	μg/dL
Lindane	μg/mL
Manganese	ng/mL
Mercury	μg/L
Mirex	ng/g of lipid
PBB (Polybrominated Biphenyls)	ng/g of lipid
PCB (Polychlorinated Biphenyls)	ng/g of lipid
<b>Urine Tests</b>	<b>Units of Measurement</b>
Arsenic	μg/g of creatinine
Cadmium	μg/g of creatinine
Mercury	μg/g of creatinine

**Attachment 10a5.**

**Letter 5**

**Full results letter for participants with  
exceedences of other chemicals**



STATE OF MICHIGAN  
DEPARTMENT OF COMMUNITY HEALTH  
LANSING

RICK SNYDER  
GOVERNOR

OLGA DAZZO  
DIRECTOR

Date

Name

Address

City, State Zip Code

Dear:

Last summer, you agreed to be part of the Michigan Department of Community Health Fish Eaters Study. We tested your blood and urine for chemicals that are often found in fish.

*If applicable*, Your test result for (chemical) was higher than most people. This does not mean that you are sick or will get sick. We recommend that you call our office or talk to your doctor to find out how to limit future contact with this chemical.

The second and third pages of this letter have all of your test results. The first row gives the name of each chemical that we looked for in your blood and urine. Your test results are in the second, or blue row, under "Your Test Results".

The orange, or third row, under "Study Results" has the results for the other people from the Detroit and Saginaw areas who were in the study. We gave you these test results so you can compare your results to theirs. The results are given as a range, meaning the lowest to the highest test results for the group, are shown in this row.

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*If applicable*, Earlier, we sent you a letter because your (arsenic/cadmium/lead/mercury) level was higher than most people. The letter recommended you make an appointment your doctor for medical advice. A copy of that letter is also included. If you have not seen your doctor yet, please make an appointment and take all of this information with you.

Thank you very much for being part of this important study, we really appreciate your time and effort. If you have questions, please feel free call 1-800-648-6942 and ask for Sue Manente.

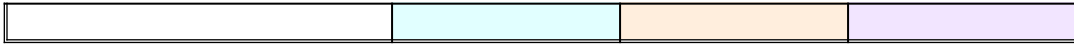
Sincerely,

Linda Dykema, Manager  
Division of Environmental Health

**Test Results** - Tests for the chemicals were done on blood or urine, except for mercury. Some chemicals are easier to find in blood and some are easier to find in urine. Mercury can be found in both blood and urine.

Blood Test Results

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<i>o,p'</i> -Dichlorodiphenyltrichloro-ethane (DDT)			<LOD - <LOD
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<b>Test</b>	<b>Your Test Results</b>	<b>U.S. Guidelines</b>
<b>Total Cholesterol</b>		Less than 200 mg/dL is Desirable 200-239 mg/dL is Borderline High 240 mg/dL is High

## **Urine Test Results**

## Units of Measurement

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<b>Blood Tests</b>	<b>Units of Measurement</b>
Cholesterol	mg/dL
Chlordane	ng/g of lipid
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Dioxins	pg-TEQ/g of lipid
Hexachlorobenzene	ng/g of lipid
Lead	µg/dL
Lindane	µg/mL
Manganese	ng/mL
Mercury	µg/L
Mirex	ng/g of lipid
PBB (Polybrominated Biphenyls)	ng/g of lipid
PCB (Polychlorinated Biphenyls)	ng/g of lipid
<b>Urine Tests</b>	<b>Units of Measurement</b>
Arsenic	µg/g of creatinine
Cadmium	µg/g of creatinine
Mercury	µg/g of creatinine



**Attachment 10a6.**

## **Blood Pressure Fact Sheet**



## What Is High Blood Pressure?

Blood pressure is the force of blood pushing against blood vessel walls. High blood pressure (HBP) means the pressure in your arteries is higher than it should be. Another name for high blood pressure is hypertension (hi-per-TEN-shun).



Blood pressure is written as two numbers, such as 112/78 mm Hg. The top, systolic, number is the pressure when the heart beats. The bottom, diastolic, number is the pressure when the heart rests between beats. Normal blood pressure is below 120/80 mm Hg. If you're an adult and your systolic pressure is 120 to 139, or your diastolic pressure is 80 to 89 (or both), you have "prehypertension." High blood pressure is a pressure of 140 systolic or higher and/or 90 diastolic or higher that stays high over time.

No one knows exactly what causes most cases of high blood pressure. It can't be cured, but it can be managed. High blood pressure usually has no signs or symptoms. That's why it is so dangerous."

About 76.4 million Americans over age 20, 1 in 3 adults, have it, and many don't even know they have it. Not treating high blood pressure is dangerous. High blood pressure increases the risk of heart attack and stroke. You can live a healthier life if you treat and manage it!

Make sure you get your blood pressure checked regularly and treat it the way your doctor advises.

### Who is at higher risk?

- People with close blood relatives who have HBP
- African Americans
- People over age 35
- Overweight people
- People who aren't physically active
- People who consume too much salt
- People who drink too much alcohol
- People with diabetes, gout or kidney disease
- Pregnant women
- Women who take birth control pills, who are overweight, had HBP during pregnancy, have a family history of HBP or have mild kidney disease

### How can I tell I have it?

You usually can't tell! Many people have it and don't know it. The only way to know if your blood pressure is high is to get it checked regularly by your doctor.

*(continued)*



### What can untreated high blood pressure lead to?

- Stroke
- Heart attack, angina or both
- Heart failure
- Kidney failure
- Peripheral arterial disease (PAD)

### What can I do about it?

- Lose weight if you're overweight.
- Eat healthy meals low in saturated fat, trans fat, cholesterol, salt (sodium) and added sugars.
- Limit alcohol to no more than one drink per day for women or two drinks a day for men.
- Be more physically active. Aim for at least 150 minutes (2 hours and 30 minutes) of moderate-intensity, or 75 minutes (1 hour and 15 minutes) of vigorous-intensity, aerobic exercise each week.
- Take medicine the way your doctor tells you.
- Know what your blood pressure should be and work to keep it at that level.



### How can medicine help?

Some medicines, such as vasodilators, help relax and open up your blood vessels so blood can flow through better. A diuretic can help keep your body from holding too much water and salt. Other medicines help your heart beat more slowly and with less force.

### HOW CAN I LEARN MORE?

- 1 Talk to your doctor, nurse or other healthcare professionals. If you have heart disease or have had a stroke, members of your family also may be at higher risk. It's very important for them to make changes now to lower their risk.
- 2 Call 1-800-AHA-USA1 (1-800-242-8721), or visit [heart.org](http://heart.org) to learn more about heart disease.
- 3 For information on stroke, call 1-888-4-STROKE (1-888-478-7653) or visit us at [StrokeAssociation.org](http://StrokeAssociation.org).

### Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

**Will I always have to take medicine?**

**What should my blood pressure be?**

**My Questions:**

**My Blood Pressure**

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit [heart.org/answersbyheart](http://heart.org/answersbyheart) to learn more.  
**Knowledge is power, so Learn and Live!**

